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Azido-Substituted BODIPY Dyes for the Production of Fluorescent Carbon Nanotubes

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Abstract

© 2015 Wiley-VCH Verlag GmbH & Co. KGaA, Weinheim. A series of azido-dyes were synthesized through Knoevenagel reactions of an azido-BODIPY with aromatic aldehydes. The nature of the substituents allowed the fine tuning of their spectroscopic properties. The dyes were used to decorate oxidized multiwalled carbon nanotubes (ox-MWCNTs), bearing terminal triple bond groups, by CuAAC reactions, affording fluorescent materials. This decoration allowed the efficient determination of the internalization of the ox-MWCNT derivatives by different model cancer cells, such as MCF7.

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Keywords

BODIPY, carbon nanotubes, click reaction, fluorescent probes